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EXAMINER JEAN GILLES, JUDE				
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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/670,681
Filing Date: September 25, 2003
Appellant(s): BRILL ET AL.

Himanshu S. Amin
Reg. No. 40,894
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 05/05/2008 appealing from the Office action mailed 12/31/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

2006/0167864

Bailey

Jul. 27, 2006

2004/0240388

Albion

Dec. 02, 2004

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

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2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-7, 9-21, 23-44, 46, 47, 49-65, 67-76, 78-92, 95-100, 102, 103, 105-112 and 114-116** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bailey et al (Bailey), Pub. No. 20060167864 A1 in view of Albion et al. (hereinafter Albion) US. Pub. No. 20040240388 A1.

Regarding claim 1: Bailey discloses the invention substantially as claimed. Bailey teaches a data analysis system (fig. 1), comprising:

a first component associated with a server of the data analysis system that facilitates generation of a first data set related to web page information obtained via a communication system (fig. 1, item 120; par. 0029); and

a second component that coordinates a data set relating to web page information from at least one distributed resource which interacts with the communication system; the second data set is utilized to refine the first data set (see abstract, fig. 1; *note that the web crawler (160) generates the data set through the Internet*; 0037-0040, 0052). However Bailey does not specifically disclose a system, wherein refining the first data set comprises adding unknown information to the first data set, when new information is received from the distributed source via the second data set or updating existing

information in the first data set when changes have occurred in the contents of the web page information as indicated by the second data set. Nonetheless, this feature is well known and would have been an obvious modification to the system shown by Bailey as evidenced by Albion.

In an analogous art, Albion shows a plurality of clients capable sending updates information to a crawler, this request information is the second data which updates the timer list with new data (see Albion, par. 0020-0022). In an attempt to update the web crawler with new information from the distributed source, change information is passed from the clients to the crawler with update timer list contents.

Given this feature, a person of ordinary skill in the art would have been readily recognized the desirability and advantages of modifying the system shown by Bailey to employ the features shown by Albion in order to facilitate the dynamic content updates (see Albion, par. 0001, 0011). In referring to 2, Albion shows a crawler receiving timer information from a client and updates its timer list in memory with the new information. By this rationale, claim 1 is rejected.

Regarding claims 1-7, 9-21, 23-44, 46, 47, 49-65, 67-76, 78-92, 95-100, 102, 103, 105-112 and 114-116, the combination Bailey-Albion teaches:

2. The system of claim 1, the first component comprising an internet web crawler (see Bailey; 120).

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3. The system of claim 1, the first component comprising an intranet web crawler (see Bailey; 120; *the crawler is usable equally in the Internet, as well as an Intranet*).

4. The system of claim 1, the second component further utilized to optimize reception of data from the distributed resources (see Bailey; 164).

5. The system of claim 1, the second component provides a scheduling function to control reception of the second data set from the at least one distributed resource (see Bailey; 147).

6. The system of claim 1, the second component utilized to facilitate communication traffic reduction via the communication system by employing a proper set of weak indicator functions representative of the first data set (see Bailey; 162).

7. The system of claim 6, the second component further utilized to randomly select and transmit a weak indicator function selected from the proper set of weak indicator functions to at least one of the distributed resources (see Bailey; 160, 162, 164).

9. The system of claim 1, the second component further utilized to generate status information about data related to the first data set; the status information transmitted to at least one distributed resource (see Bailey; fig. 5; 0070).

10. The system of claim 9, the status information comprising, at least in part, a freshness flag to indicate freshness of information related to the first data set (see Bailey; fig. 5; 0070).

11. The system of claim 9, the status information comprising, at least in part, a hash of contents of information related to the first data set (see Bailey; fig. 5; 0070, 0076).

12. The system of claim 9, the status information comprising, at least in part, a copy of information of the first data set (see Bailey; fig. 5; 0070, 0076).

13. The system of claim 1, the communication system comprising an internet (see Bailey; 110, 120, 130).

14. The system of claim 1, the communication system comprising a world wide web (see Bailey; 110, 120, 130).

15. The system of claim 1, the communication system comprising an intranet (see Bailey; 110, 120, 130).

16. The system of claim 15, the intranet comprising a local area network. (see Bailey; 130).

17. The system of claim 15, the intranet comprising a wide area network (see Bailey; 110, 120, 130).

18. The system of claim 1, the distributed resources comprising clients of a server (see Bailey; 110, 120, 130).

19. The system of claim 1, the distributed resources comprising trusted entities interactive with the communication system and the second component (see Bailey; fig. 2, 5).

20. The system of claim 1, the first data set comprising internet web page data (see Bailey; 0043, 0070, 0087; fig. 1 & 2).

21. The system of claim 1, the first data set comprising intranet web page data (see Bailey; 0043, 0070, 0087; fig. 1 & 2).

23. The system of claim 1, the second data set comprising, at least in part, a hash of contents of at least one web page (see Bailey; 0040, 0070, 0087; fig. 1, 2, & 5).

24. The system of claim 1, the second data set comprising, at least in part, a Uniform Resource Locator (URL) of at least one web page (see Bailey; 0040, 0070, 0087; fig. 1,

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2 & 5).

25. The system of claim 1, the second data set comprising, at least in part, a time stamp relating to an acquisition time for information about at least one web page (see Bailey; 0043, 0070, 0087; fig. 1 & 2).

26. The system of claim 1, the second data set comprising, at least in part, a delta indication of the changes to contents of at least one web page (see Bailey; 0043, 0070, 0087; fig. 1 & 2).

27. The system of claim 26, the delta indication including, at least in part, a hash of previous contents of a web page and a hash of recent contents of the web page (see Bailey; 0028, 0043, 0070, 0087; 0076, fig. 1 & 2).

28. The system of claim 1, the second data set comprising, at least in part, a status indication of changes to contents of at least one web page (see Bailey; 0028, 0043, 0070, 0087; 0076, fig. 1 & 2).

29. The system of claim 28, the status indication including, at least in part, a percentage relating to an amount of change of contents of a web page (see Bailey; 0028, 0043, 0070, 0087; 0076, fig. 1 & 2).

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30. The system of claim 28, the status indication including, at least in part, a significance indicator to signify importance of changes in contents of a web page (see Bailey; 0028, 0043, 0070, 0087; 0076, fig. 1 & 2).

31. The system of claim 1, the second data set comprising internet web page data (see Bailey; 0028, 0043, 0070, 0087; 0076, fig. 1 & 2).

32. The system of claim 1, the second data set comprising intranet web page data (see Bailey; 0028, 0043, 0070, 0087; 0076, fig. 1 & 2).

33. The system of claim 1, the second data set comprising data compiled utilizing at least one weak indicator function randomly selected from a set of weak indicator functions; the set of weak indicator functions representative of the first data set (see Bailey; 0028, 0043, 0070, 0087; 0076, fig. 1 & 2).

34. The system of claim 1, further comprising a search component to accept at least one search query and generate at least one search reply having at least a portion of the first data set represented by information embedded in the search reply (see Bailey; 0028, 0043, 0070, 0087; 0076, fig. 1 & 2).

35. The system of claim 1, further comprising a web page server component to construct web pages having at least a portion of the first data set represented by

information embedded in at least one link found on at least one constructed web page (see Bailey; 0028, 0043, 0070, 0087; 0076, fig. 1 & 2).

36. The system of claim 1 further comprising a storage component to store the first data set (see Bailey; 0028, 0043, 0070, 0087; 0076, fig. 1 & 2).

37. A method for facilitating data analysis, comprising:

generating a first data set relating to a second data set obtained from web pages interactive with a server of a communication system (see Bailey; see abstract; fig. 1; (see Bailey; 0037-0040, 0052);

receiving a third data set from at least one distributed resource that is interactive with the communication system; the third data set comprising web page related information generated by the distributed resource; and refining the second data set to reflect information obtained from the third data set (see Bailey; 0084-0088);

adding unknown information to the second data set when new information is received from the distributed source *via* the third data set;

updating existing information in the second data set when changes have occurred as indicated by the third data set; and

passing status information to the distributed resource through one or more indicators after information from the third data set has been analyzed (see Albion, par. 0020-0022).

38. The method of claim 37, the first data set comprising a representation of the second data set (see Bailey; see abstract; fig. 1; 0037-0040, 0052).

39. The method of claim 38, the representation of the second data set comprising, at least in part, a hash of contents of at least one web page contained in the second data set (see Bailey; 0028, 0043, 0070, 0087; 0076, fig. 1 & 2).

40. The method of claim 38, the representation of the second data set comprising, at least in part, a status indication of at least one web page contained in the second data set (see Bailey; 0028, 0043, 0070, 0087; 0076, fig. 1 & 2).

41. The method of claim 40, the status indication comprising a freshness flag to indicate if the web page information is current (see Bailey; fig. 5; 0070).

42. The method of claim 37, the first data set comprising a copy of the second data set (see Bailey; 0028, 0043, 0070, 0087; 0076, fig. 1 & 2).

43. The method of claim 37, the second data set comprising web page information compiled by a web crawler (see Bailey; 0028, 0043, 0070, 0087; 0076, fig. 1 & 2).

44. The method of claim 37, the third data set comprising web page information based

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upon client accessed web page information on the communication system (see Bailey; 0028, 0043, 0070, 0087; 0076, fig. 1 & 2).

46. The method of claim 37, the communication system comprising an internet (see Bailey; fig. 1).

47. The method of claim 37, the communication system comprising an intranet (see Bailey; fig. 1).

49. The method of claim 37, further including: transmitting the first data set to at least one distributed resource that is interactive with the communication system making the first data set available to be utilized by the distributed resource to generate the third data set (see Bailey; 0028, 0084-0088; 0037-0043, 0070, 0087; 0076, fig. 1 & 2).

50. The method of claim 38, further including: generating a set of weak indicator functions to represent the second data set; and selecting random weak indicator functions from the set of weak indicator functions to transmit to the distributed resources as the first data set (see Bailey; 0028, 0084-0088; 0037-0043, 0070, 0087; 0076, fig. 1 & 2).

51. The method of claim 50, the set of weak indicator functions comprising a proper set of weak indicator functions such that a non-zero probability exists that a randomly

selected weak indicator function can identify a new web page (see Bailey; 0028, 0084-0088; 0037-0043, 0070, 0087; 0076, fig. 1 & 2).

52. The method of claim 50, generating a set of weak indicator functions comprising: providing a dictionary representative of the second data set; partitioning randomly the dictionary into non-overlapping subdictionaries; and creating a function where $l(x)=1$ if and only if at least one subdictionary's weak indicator function is equal to one (see Bailey; 0076-0080).

53. The method of claim 37, further including: comparing the third data set to the second data set to reveal spoof data included in the second data set (see Bailey; 0028, 0084-0088; 0037-0043, 0070, 0087; 0076, fig. 1 & 2).

54. The method of claim 37, further including: optimizing reception of at least one third data set through scheduling of the distributed resources (see Bailey; 0028, 0084-0088; 0037-0043, 0070, 0087; 0076, fig. 1 & 2).

55. The method of claim 37, further including: receiving a web page search query from at least one distributed resource; generating a web search results page in response to the web page search query from the distributed resource; embedding portions of the first data set in links found on the web search results page; and transmitting the web search results page as a representation of at least a portion of the second data set to

the distributed resource (see Bailey; 0028, 0084-0088; 0037-0043, 0070, 0087; 0076, fig. 1 & 2).

56. The method of claim 37, further including: constructing a web page utilizing at least a portion of the first data set to embed information about links found in the web page; and transmitting the web page to disseminate the first data set to at least one distributed resource (see Bailey; 0028, 0084-0088; 0037-0043, 0070, 0087; 0076, fig. 1 & 2).

57. A data analysis system, comprising:

means for generating at least one first data set from a server of communication system;

means for receiving and coordinating at least one second data set from at least one ~~distributed resource~~ client which interacts with the server of the communication system;

and means for refining the first data set utilizing at least one second data set (see Bailey; 0028, 0084-0088; 0037-0043, 0070, 0087; 0076, fig. 1 & 2);

wherein refining the first data set comprises the at least one of adding unknown information to the first data set when new information is received from the client via the second data set and updating existing information in the first data set when changes have occurred in the web page as indicated by the second data set (see Albion, par. 0020-0022).

61. A data analysis system, comprising: a first component associated with at least one client of a distributed web crawling system

that generates web page information from at least one visited web site for utilization in [a] the distributed web crawling system; ~~the web page information transmitted by the first component to a second component~~; and (see Bailey; 0028, 0084-0088; 0037-0043, 0070, 0087; 0076, fig. 1 & 2)

a second component associated with a server that receives the web page information transmitted by the first component via a communication system, wherein the first component receives a set of data from the second component to utilize in the generation of the web page information comprising at least comparison data based on the visited web page and the received set of data (see Albion, par. 0020-0022).

92. A method for facilitating data analysis, comprising: compiling a first data set derived from accessing web pages via a client of a communication system; ~~and~~ transmitting, selectively, the first data set to an entity comprising at least a server of a distributed crawling system that is interactive with the communication system (see Bailey; 0028, 0084-0088; 0037-0043, 0070, 0087; 0076, fig. 1 & 2).

receiving a representation of a second data set compiled by the server of the web crawler;

the second data set relating to at least one web page from the communication system; and utilizing the second data set to control which web pages to visit to compile the first data set (see Albion, par. 0020-0022).

114. 114. (Currently Amended) A computer readable medium having stored thereon computer executable components comprising:

a first component associated with a server of the data analysis system that facilitates generation of a first data set related to web page information obtained via a communication system; and a second component that coordinates a second data set relating to web page information from at least one distributed resource associated with at least a client of the server which interacts with the communication system; (see Bailey; 0028, 0084-0088; 0037-0043, 0070, 0087; 0076, fig. 1 & 2)

the second data set is utilized to refine the first data set, wherein refining the first data set comprises adding unknown information to the first data set when new information is received from the distributed source via the second data set and updating existing information in the first data set when changes have occurred in the contents of the web page information as indicated by the second data set(see Albion, par. 0020-0022).

Claims 58-60, 62-65, 67-76, 78-92, 95-1100, 102, 103, 105-112, and 115-116 are similar to other claims addressed above (see rejection of claims 2-56 above).

(10) Response to Arguments

Appellants request a reversal of the rejection of claims 1-7, 9-21, 23-44, 46, 47, 49-65, 67-76, 78-92, 95-100, 102, 103, 105-112 and 114-116, rejected as unpatentable under

35 U.S.C. § 103(a) over Bailey *et al.*, (U.S. 20060167864) in view of Albion *et al.* (U.S. 20040240388). Appellants contend that Bailey *et al.* and Albion *et al.* alone or in combination fail to teach or suggest all features set forth in the subject claims. The reasons for requesting the reversal of this rejection are addressed below.

Issue 1) Appellants contend the cited document is silent regarding utilizing web page information communicated by a client of the distributed web crawler system to update its original crawler web page data to reflect a new web page or change of contents in a known web page. For example, Bailey *et al.* teaches a conventional web crawler implemented by a server but does not teach or suggest that the web crawler 160 is updated with inputs from the clients 110 (See Bailey *et al.* Fig. 1 and paragraph [0037]). Thus Bailey *et al.* does not disclose a distributed web crawler wherein a client updates web pages associated with a server of the distributed system as recited by the subject claims.

Issue 1 response: The Examiner disagrees with the Appellants assertion with regards the point of contention related to issue 1. It is the position of the Examiner that both Bailey and Albion discloses the step of “regarding utilizing web page information communicated by a client of the distributed web crawler system to update its original crawler web page data to reflect a new web page or change of contents in a known web page”. Bailey teaches a web crawler that is initially evaluated, according to a set of content-based rules to generate a score that indicates a likelihood that the web page includes a product offering or content of other pages from the same site (see Bailey par.

0011). Note that it well known in the art that those other pages can be submitted by client or another server, submitting web pages containing product offering relevant to user's search. In fig. 5 of Bailey, database 147 is refreshed frequently, updating the original crawler web page data, thereby reflecting a new web pages with new content offerings gathered from other client or server systems (see Bailey, par. 0042, and 0070)

Issue 2) Going back to issue 1 above, the Appellants state that Therefore, it is concluded that Albion *et al.* is silent regarding *refining the second data set to reflect information obtained from the third data set by adding unknown information to the second data set when new information is received from the distributed source via the third data set* as recited by the subject claims.

Issue 2 response: The Examiner disagrees with this assertion. In addition to the teachings of Bailey, Albion discloses in par. 0018 *"the crawler 204 performs various functions including the processing of client requests, detection of timeouts of the timers, notification of timeouts, and management of the list of available timers 208. Client requests may include a request to allocate an available timer to a specified connection, a request to de-allocate a timer, a request to start a timer, or a request to 204 maintains the list of available timers 208, including timers that have not been allocated or timers that have timed out"*. Client request and/or timeout timers are updated in crawler 104, updating it original contents. By this rationale, the rejection of

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claims 1-7, 9-21, 23-44, 46, 47, 49-65, 67-76, 78-92, 95-100, 102, 103, 105-112 and 114-116 are sustained.

For the above reasons, it is believed that the rejections should be sustained.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Any inquiry concerning this communication or earlier communications from examiner should be directed to Jude Jean-Gilles whose telephone number is (571) 272-3914.

The examiner can normally be reached on Monday-Thursday and every other Friday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tonia Dollinger, can be reached on (571) 272-4170. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-3301.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-0800.

Respectfully submitted,

/Jude J Jean-Gilles/

Primary Examiner, Art Unit 2143

August 22, 2008

/Tonia LM Dollinger/
Supervisory Patent Examiner, Art Unit 2143

/Nathan J. Flynn/
Supervisory Patent Examiner, Art Unit 2154